

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Unlicensed Operation in the TV Broadcast Bands)	ET Docket No. 04-186
)	
Additional Spectrum for Unlicensed Devices)	ET Docket No. 02-380
Below 900 MHz and in the 3 GHz Band)	
)	

**COMMENTS OF THE ASSOCIATION OF PUBLIC TELEVISION
STATIONS**

The Association of Public Television Stations (“APTS”)¹ hereby submits comments in the above-captioned proceeding.² On May 13, 2004, the FCC adopted this Notice of Proposed Rulemaking to introduce certain unlicensed devices in the broadcast television spectrum at locations where that spectrum is apparently not being currently used. APTS has very serious concerns regarding the introduction of these devices into the television band at this time.

APTS urges the Commission to test and implement additional safeguards to protect the incumbent television service prior to any further action in this proceeding. Moreover, should the Commission go forward with the authorization of such unlicensed devices, it should delay this action until the channel election process for final DTV channels has been completed. Additionally, APTS urges the Commission to ensure that

¹ APTS is a nonprofit organization whose members comprise the licensees of nearly all of the nation’s 356 CPB-qualified noncommercial educational television stations. APTS represents public television stations in policy matters before the Commission, Congress, and the Executive Branch and engages in planning and research activities on behalf of its members.

² Unlicensed Devices in the TV Broadcast Bands; Additional Spectrum for Unlicensed Devices Below 900MHz and in the 3 GHz Band, Notice of Proposed Rulemaking, FCC 04-113 (rel. May 25, 2004).

any introduction of unlicensed devices not interfere with the television translator service, upon which millions of rural Americans depend for television viewing.

A. The Commission Should Proceed with Caution and Only with Additional Engineering and Policy Safeguards

APTS believes that some unlicensed devices could benefit American consumers in a number of ways by allowing for the introduction of wireless broadband services in rural and urban areas. In fact, many of these unlicensed devices are designed to operate in spectrum other than the television band. APTS is interested in the possibility that in circumstances where public television stations are providing data services to their communities through their licensed digital broadcast facilities, unlicensed devices capable of receiving off-air digital signals could work in tandem with the broadcast service to provide an additional “back-channel,” thus enabling true two-way digital data services over the air. APTS is also encouraged by claims that the introduction of unlicensed devices with spectrum sensing technology could aid in the distribution of off-air DTV receivers in more consumer electronics equipment, such as personal computers, lap-tops, PDAs and similar equipment.

However, APTS has very serious concerns about the introduction of these unlicensed devices into the television broadcast band at this time and significant questions regarding the compatibility of unlicensed devices with incumbent broadcast operations. Public television stations have invested over a billion dollars in new digital broadcast facilities. In addition, a significant number of public television viewers also rely on over-the-air analog transmissions, which have been similarly supported by both public and private funds over the more than 30 year history of public television.

To ensure the success of the digital transition and to ensure the continuity of service for analog broadcast viewers in both urban and rural communities, the Commission should therefore exercise the greatest of caution if it proceeds with the introduction of unlicensed devices in the broadcast television spectrum. In this regard, to our knowledge, there have been few if any real-world tests of the technology and its compatibility in a band already populated by incumbent licensees. If the Commission pursues the policy of introducing certain unlicensed devices in the TV band, it is essential that accurate and methodologically sound tests be conducted in selected markets prior to any rules of general applicability being issued.³

Moreover, should the Commission introduce unlicensed devices into the TV band, APTS urges it consider doing so only after the transition to digital has been completed in relevant markets. This would ensure that as the DTV channel repacking process that the Commission has approved goes forward, it will not become unnecessarily complicated by the presence of unlicensed devices in the TV band.⁴

³ In addition, the Commission should consider mandating limited improvements to receiver standards, as interference is frequently a function of the selectivity of receivers, as well as the proximity of an interfering transmission device to the receiver. See Interference Immunity Performance Specifications for Radio Receivers; Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television, Notice of Inquiry, FCC 03-54, ¶¶ 31-36 (March 13, 2003).

⁴ In addition, to the extent that many public television stations are authorized to operate at lower power than some commercial stations, and often at a tower height and location disadvantage as well, public television stations may be particularly susceptible to interference from unlicensed devices. Moreover, as some state networks place their transmitters between centers of population to enhance signal coverage, interference to public television signals from unlicensed devices in populated areas may also be particularly problematic.

B. If Authorized, Unlicensed Devices Should Not Interfere with the Television Translator Service

APTS also remains concerned regarding the impact of unlicensed devices on the television translator service. To ensure universal service to all Americans, noncommercial educational broadcast services are frequently delivered to local rural communities via hundreds of low power translators, some operating at powers of just a few watts. APTS remains concerned that without adequate safeguards, the introduction of unlicensed devices in the TV band may compromise the integrity of both digital and analog infrastructures, especially in rural regions that rely on low power translators.

Although the Commission states that television translators are to be protected against interference by unlicensed devices, the Commission has proposed protecting only the translator's Grade A contour.⁵ However, many television translators deliver a useable picture to rural communities that lie within the translator's Grade B contour or even beyond. In fact, numerous translators are linked in "daisy chains," whereby one translator feeds another in extended links to reach especially rural or remote populations, and in these circumstances frequently one translator will pick up the signal of another translator even beyond the latter's Grade B contour, often with the assistance of high-gain receiving systems and low-noise antenna amplifiers.

In light of these unique circumstances, protection should therefore extend to the translator's Grade B contour in order to preserve universal access to noncommercial educational television in rural areas. Accordingly, the protected contour values for TV

⁵ See Unlicensed Devices in the TV Broadcast Bands; Additional Spectrum for Unlicensed Devices Below 900MHz and in the 3 GHz Band, Notice of Proposed Rulemaking, FCC 04-113 (rel. May 25, 2004), Appendix B.

translators should be amended and any approved rules should also include protection contour values for the newly authorized digital television translator service as well.

Conclusion

For the above reasons, APTS urges extreme caution and restraint as the Commission considers the introduction of unlicensed devices in the TV band. APTS urges the Commission to delay introduction of unlicensed devices in the TV until real-world testing of this technology has taken place and the DTV channel election process has been completed. The Commission should also be careful to ensure the integrity of the television translator service upon which millions of Americans depend.

/s/ Lonna M. Thompson

Lonna M. Thompson
Vice President and General Counsel
Andrew D. Cotlar
Assistant General Counsel
Association of Public Television Stations
666 Eleventh Street, NW, Suite 1100
Washington, D.C. 20001
www.pts.org
Telephone: 202-654-4200
Fax: 202-654-4236

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